AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph starting at page 7, line 20 and ending on page 8, line 3 of the specification as filed with the following replacement paragraph:

-- ~~The novel bacterial isolate was deposited under the Budapest Treat with the American Type Culture Collection (ATCC), P.O. Box 1549, Manassas, VA 20108, USA (www.atcc.org) on _____ and has been assigned Accession Number _____.~~ For purposes of this invention, any isolate of this bacterium having identifying characteristics of BAV1, including those bacteria having the capacity of BAV1 for reducing dichloroethenes and VC to ethane and inorganic chloride under anaerobic conditions, would be effective. Hence, strains having identifying characteristics of BAV1 can be obtained by methods such as, for example and without limitation, mutagenesis, evolution or mating of strain BAV1. --

Please replace the paragraph starting at page 11, line1 and ending on page 12, line 2 of the specification as filed with the following replacement paragraph:

-- Continued transfers over 4 years in mineral salts medium supplemented with VC, hydrogen, and acetate yielded a nonmethanogenic, ethene-producing culture. Dechlorination occurred with acetate as the sole electron donor, although at lower rates, apparently mediated in association with a syntrophic, acetate-oxidizing partner population (He et al. 2002, 2003). Consecutive transfers without hydrogen achieved further enrichment. VC dechlorination activity was recovered repeatedly from 10.sup.-5 dilutions of consecutive dilution-to-extinction series in hydrogen-amended medium. Following this enrichment procedure, microscopic examination revealed the presence of three morphotypes: a small, disc-shaped organism and two rod-shaped organisms, one short and one long. Initial attempts to obtain the VC-dechlorinating population in pure culture using the dilution-to-extinction principle as well as cultivation in semisolid medium containing 0.5% low melting agarose were unsuccessful. The addition of high concentrations of the peptidoglycan inhibitor ampicillin to cultures, however, did not diminish VC dechlorination activity. Growth in the presence of ampicillin was therefore used to obtain pure cultures of the

VC dechlorinating strain. Following five consecutive transfers in liquid medium containing 1 mg ml.sup.-1 ampicillin, rod-shaped organisms were no longer detectable in cultures, by microscopic examination. Dechlorinating activity was recovered reproducibly from 10.sup.-7 dilutions in defined completely synthetic medium supplemented with VC, hydrogen and acetate. VC dechlorinating activity was also obtained in cultures inoculated with tiny opaque colonies that developed after 4 to 5 weeks in semisolid medium. Fermentative growth was not observed. The cultures obtained following the foregoing procedures appeared microscopically homogeneous (FIG. 1A). The isolate was designated BAV1 ~~and was deposited with American Type Culture Collection (ATCC), P.O. Box 1549, Manassas, Va. 20108, USA (www.atcc.org) on _____ and assigned accession number _____~~. --

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